

This listing of claims will replace all prior versions, and the listings of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A plasma processing chamber configured to generate a confined plasma, comprising:

a first powered electrode configured to receive a workpiece, said first powered electrode having a first electrode area;

a power generator operatively coupled to said first powered electrode and configured to communicate power to said first powered electrode;

a second electrode disposed at a distance from said first powered electrode, said first powered electrode and said second electrode configured to convert said gas to a plasma, said second electrode having a second electrode area;

a plurality of confinement rings surrounding a volume within which said confined plasma is substantially disposed, the plurality of confinement rings being suspended parallel to and surrounding the first powered electrode and second electrode from within the plasma processing chamber, the plurality of confinement rings capable of being raised and lowered to extend into a region above and around the first powered electrode; and

a ground extension adjacent said first powered electrode and surrounding said first powered electrode within the volume.

Claim 2 (canceled)

Appl. No. 10/077,072

Amdt. dated 11/7/2003

PATENT

Reply to Office action of 09/09/2003

Claim ²/~~2~~ (original): The plasma processing chamber of claim 1 wherein said ground extension further comprises a protrusion.

Claim 4 (canceled)

Claim ³/~~3~~ (currently amended): The plasma processing chamber of claim 1 {4}, wherein said ground extension is configured to drain charge from said plasma.

Claim 6 (canceled)

Claim 7 (canceled)

Claim ⁴/~~8~~ (original): The plasma processing chamber of claim 1 further comprising an electrode area ratio of greater than 1.0, said area ratio defined by dividing said second electrode area by said first electrode area, such that said second electrode area is greater than said first electrode area.

Claim ⁵/~~9~~ (original): The plasma processing chamber of claim 1 wherein said second electrode further comprises a notch, said notch configured to increase said second electrode area.

Claim 10 (canceled)

Claim 11 (canceled)

Reply to Office action of 09/09/2003

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Claim ~~12~~ (currently amended): The plasma processing chamber of claim ~~9~~⁵~~11~~, further comprising an area ratio of greater than 1.0, said area ratio defined by dividing said second electrode surface area by said first electrode area, such that said second electrode surface area is greater than said first electrode area.

¹
Claim ~~13~~ (currently amended): A plasma processing chamber configured to generate a confined plasma, comprising:

a first powered electrode configured to receive a workpiece, said first powered electrode having a first electrode area ;

a power generator operatively coupled to said first powered electrode and configured to communicate power to said first powered electrode;

a second electrode disposed at a distance from said first powered electrode, said first powered electrode and said second electrode configured to convert said gas to a plasma, said second electrode having a second electrode area;

a plurality of confinement rings surrounding said first powered electrode, said second electrode and defining a volume within which the confined plasma is substantially disposed, the plurality of confinement rings being suspended parallel to and surrounding the first powered electrode and second electrode from within the plasma processing chamber, the plurality of confinement rings capable of being raised and lowered to extend into a region above and around the first powered electrode; and

a ground extension adjacent said first powered electrode, and surrounding said first powered electrode within the volume confined by the plurality of confinement rings.

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Claim ~~14~~ (original): The plasma processing chamber of claim ~~13~~⁷, wherein said ground extension is configured to drain charge from said plasma.

Claim 15 (canceled)

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Claim ~~16~~ (currently amended): The plasma processing chamber of claim ~~14~~ 15 wherein said ground extension includes a protrusion.

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Claim ~~17~~ (currently amended): The plasma processing chamber of claim ~~14~~ 16 wherein said second electrode further comprises a notch, said notch configured to increase said second electrode area.

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Claim ~~18~~ (currently amended): A method for generating a confined plasma in a plasma processing chamber including a plurality of confinement rings surrounding a volume within which said confined plasma is substantially disposed, said method comprising:

receiving a gas in said plasma processing chamber;

causing a first electrode to receive a workpiece, said first electrode operatively coupled to a power supply;

causing a second electrode disposed at a distance from said first electrode to receive RF power from said first electrode, said second electrode having a second electrode area that is greater than said first electrode area;

engaging a power supply to communicate RF power to said first electrode to generate a plasma; and

positioning a ground extension adjacent said first electrode and within the volume defined by the plurality of confinement rings to drain a plurality of charge from said plasma, the plurality of confinement rings being positioned above and surrounding the first electrode, the second electrode and a portion of the ground extension.

¹²
Claim ~~19~~ (original): The method of claim ¹¹~~18~~ further comprising generating said confined plasma due in part to said plurality of confinement rings and said ground extension.

Claims 20-21 (canceled)

¹³
Claim ~~22~~ (previously added): The plasma processing chamber of claim ⁷~~23~~, wherein said ground extension is separated from said first powered electrode by a dielectric.

¹⁴
Claim ~~23~~ (new): The plasma processing chamber of claim ¹⁰~~17~~ further comprising an area ratio of greater than 1.0, said area ratio defined by said second electrode surface area to said first electrode area, such that said second electrode surface area is greater than said first electrode area.

¹⁵
Claim ~~24~~ (new): The plasma processing chamber of claim 1, wherein said ground extension is separated from said first powered electrode by a dielectric.